With regard to claim 1, the Examiner cites column 3, line 64 to column 4, line 36 of Presby for allegedly disclosing all of the features of the claimed invention. Applicant respectfully submits that the claimed invention would not have been anticipated by or rendered obvious in view of the cited reference.

Independent claim 1 is directed to a "method of fabricating an optical fiber by drawing a perform." Claim 1 recites:

> determining variations in optical or geometric characteristics of the preform departing from intended design characteristics of the preform prior to heating the preform for drawing the optical fiber, and
>
> modifying a diameter of the optical fiber during drawing as a function of said determined variations to compensate the effect of said variations on the propagation characteristics of the optical fiber.

Presby discloses a method of determining a refractive index profile and core diameter of optical fibers and fiber preforms by transversally illuminating the fiber/preform with a focused beam of UV radiation. As shown in Figure 1, the profile and the core diameter of the perform 10 are measured by illuminating the preform 10 is illuminated with a focused beam of ultraviolet radiation 15 whose beam width w is small compared to the preform core diameter d. This induces a fluorescence along a thin pencil-like region 16 of the preform core whose intensity varies in proportion to the concentration of the dopant. Inasmuch as the measured intensity of the fluorescence is proportional to the dopant concentration, the index profile of the perform can be directly observed by this method. The extent of the fluorescence provides a measure of the core diameter (see column 1, line 64-68).

Presby further discloses that the index profile and diameter of the optical fiber can be measured as the fiber is being drawn in order to control the rate at which a fiber is drawn (i.e., vary the diameter of the fiber). As shown in Figure 7, a preform 70 is inserted in an oven 71 and a fiber 72 is drawn at a rate determined by a motor 76 driving a drum 75 under the control of a processor 78. As the fiber is being drawn, it is illuminated by UV source 74, the fluorescing core region is observed by a camera 73 and the intensity information thus recorded is fed to processor 78 which computes the core diameter and the relative index difference between the core and the cladding, and compares these values with previously stored information relating these parameters. If the value of the relative index difference is increasing, the processor 78 causes the motor 76 to rotate more quickly so as to reduce the fiber diameter. On the other hand, if the relative index difference is decreasing, the motor 76 is caused to rotate more slowly.

However, nowhere does Presby teach or suggest "modifying the diameter of the fiber during drawing as a function of said determined variations [in the optical or geometric characteristics of the preform] to compensate the effect of said variations on the propagation characteristics of the fiber", as required by claim 1. Although Presby discloses measuring the index profile and the core diameter of the preform or the optical fiber, Presby discloses controlling the diameter of the drawn optical fiber based on the measured index profile and core diameter of only the optical fiber. That is, the teachings of Presby at column 3, line 64 to column 4, line 36 (the section of Presby cited by the Examiner) are limited to monitoring the index profile and core diameter of the optical fiber as it being drawn and the controlling the diameter of the optical fiber in response thereto (see also claim 6 of Presby). Thus, Presby does not disclose

modifying a diameter of the optical fiber during drawing as a function of the variations in optical or geometric characteristics of the preform prior to heating the preform for drawing the optical fiber to compensate the effect of the variations on propagation characteristics of the optical fiber.

Further, Dudderar does not teach or suggest the features of the claimed invention which are missing from Presby. As discussed in the Amendment filed January 26, 2004, Dudderar discloses a method for monitoring the drawdown zone of an optical fiber preform to determine the geometric properties of the preform in the drawdown zone and the resultant optical fiber. Based on the determined properties of the preform in the drawdown zone and the resultant optical fiber, the diameter of the drawn fiber is controlled. Thus, Dudderar discloses determining the characteristics of the preform as the preform is heated and the optical fiber is drawn therefrom. On the other hand, the claimed invention requires determining variations in the characteristics of the preform prior to heating the preform for the drawing process and modifying the diameter of the fiber during drawing as a function of the determined variations to control the transmission/propagation characteristics of the fiber.

Accordingly, Applicant respectfully submits that independent claim 1, as well as dependent claims 2-8, should be allowable because Presby, alone or combined with Dudderar, does not teach or suggest all of the features of the claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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